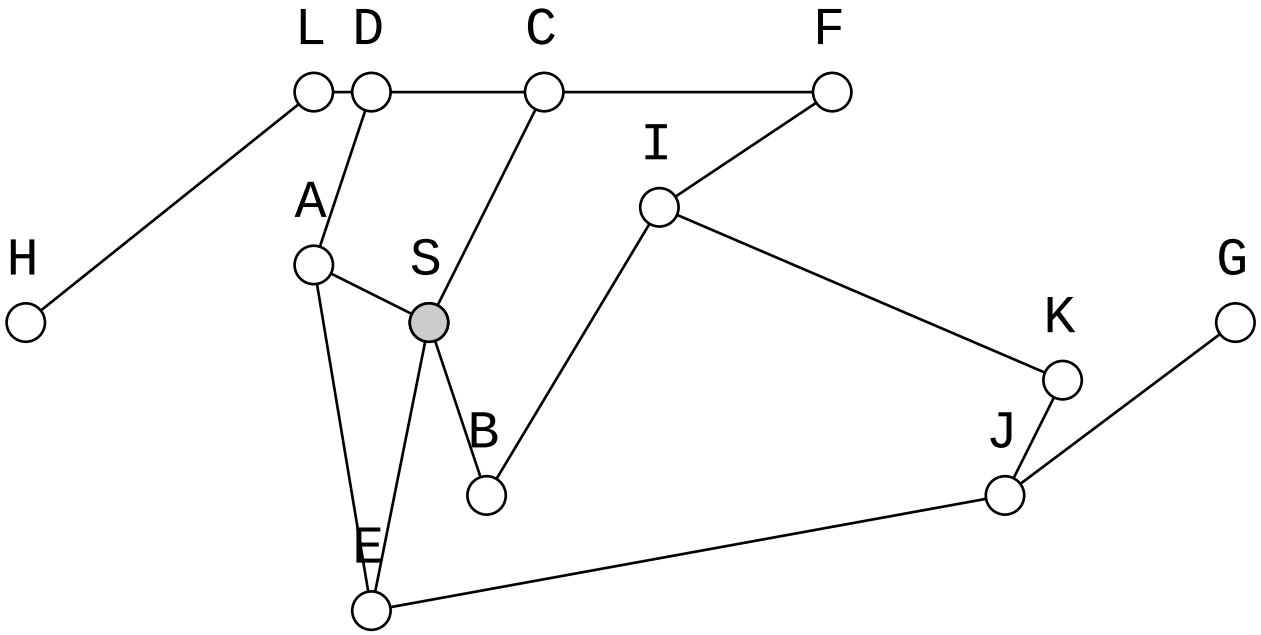
A* search

Iteration 0



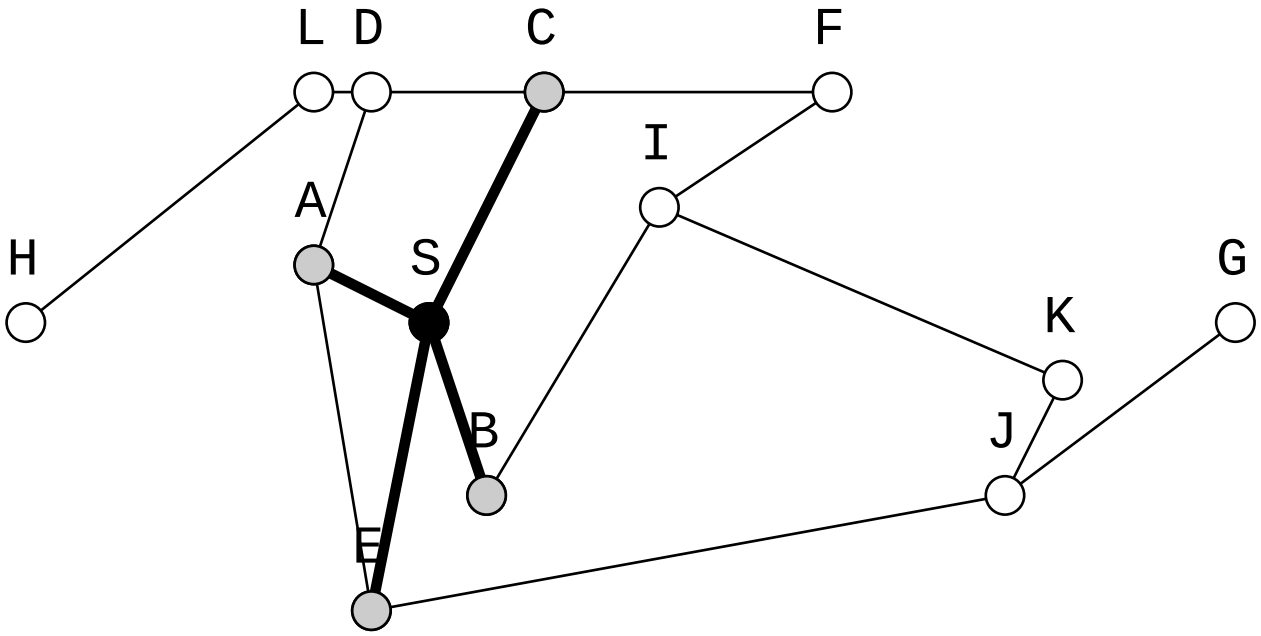
OPEN list:

  S: g= 0.0 h=14.0 f=14.0 <== expand

CLOSED list:

A* search

Iteration 1



OPEN list:

A: g= 2.2 h=16.0 f=18.3

C: g= 4.5 h=12.6 f=17.1

B: g= 3.2 h=13.3 f=16.5 <== expand

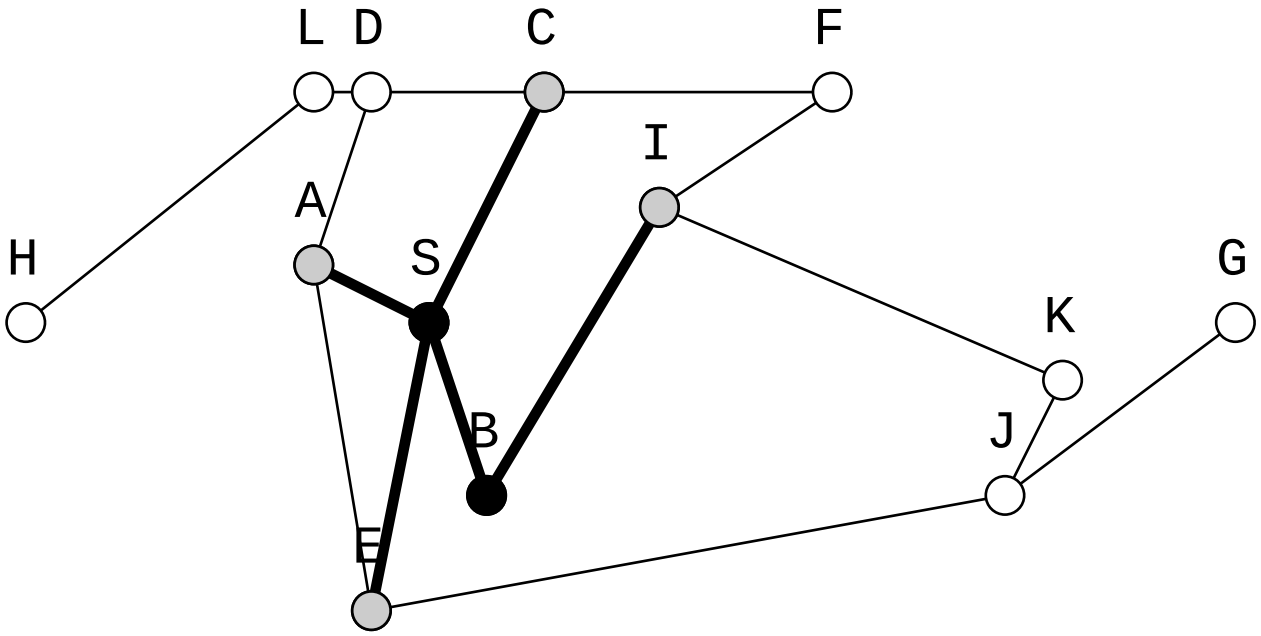
E: g= 5.1 h=15.8 f=20.9

CLOSED list:

S: g= 0.0 h=14.0 f=14.0

A* search

Iteration 2



OPEN list:

  I: g= 9.0 h=10.2 f=19.2

  A: g= 2.2 h=16.0 f=18.3

  C: g= 4.5 h=12.6 f=17.1 <== expand

  E: g= 5.1 h=15.8 f=20.9

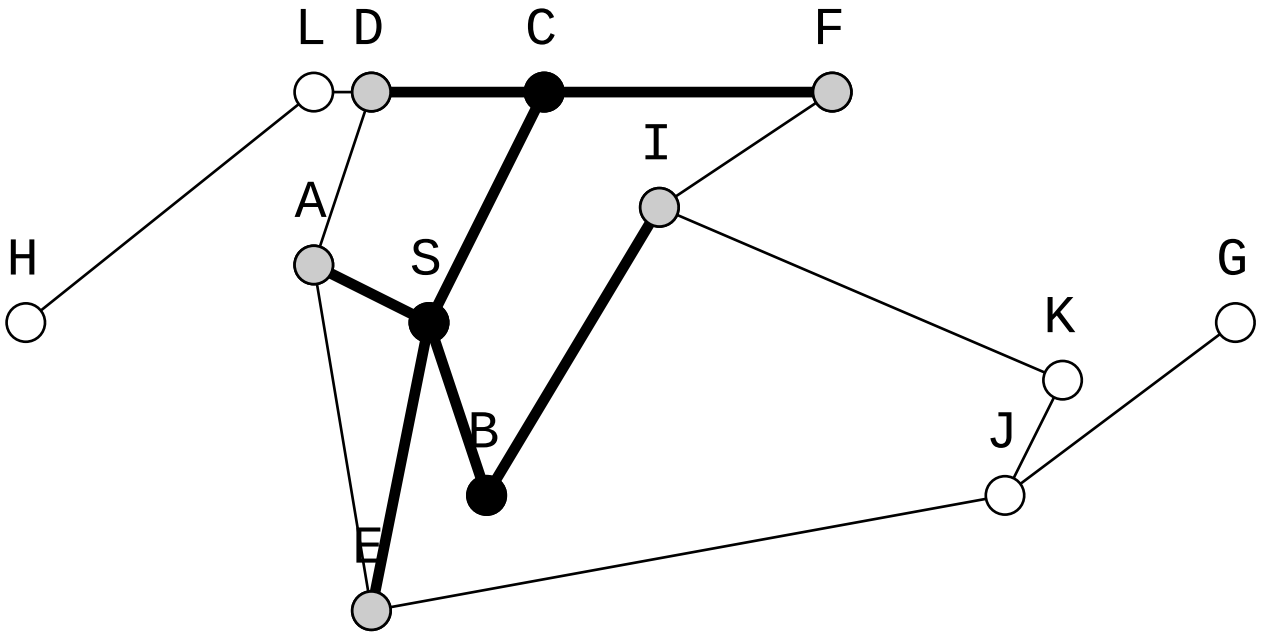
CLOSED list:

  B: g= 3.2 h=13.3 f=16.5

  S: g= 0.0 h=14.0 f=14.0

A* search

Iteration 3



OPEN list:

F: g= 9.5 h= 8.1 f=17.5 <== expand

D: g= 7.5 h=15.5 f=23.0

I: g= 9.0 h=10.2 f=19.2

A: g= 2.2 h=16.0 f=18.3

E: g= 5.1 h=15.8 f=20.9

CLOSED list:

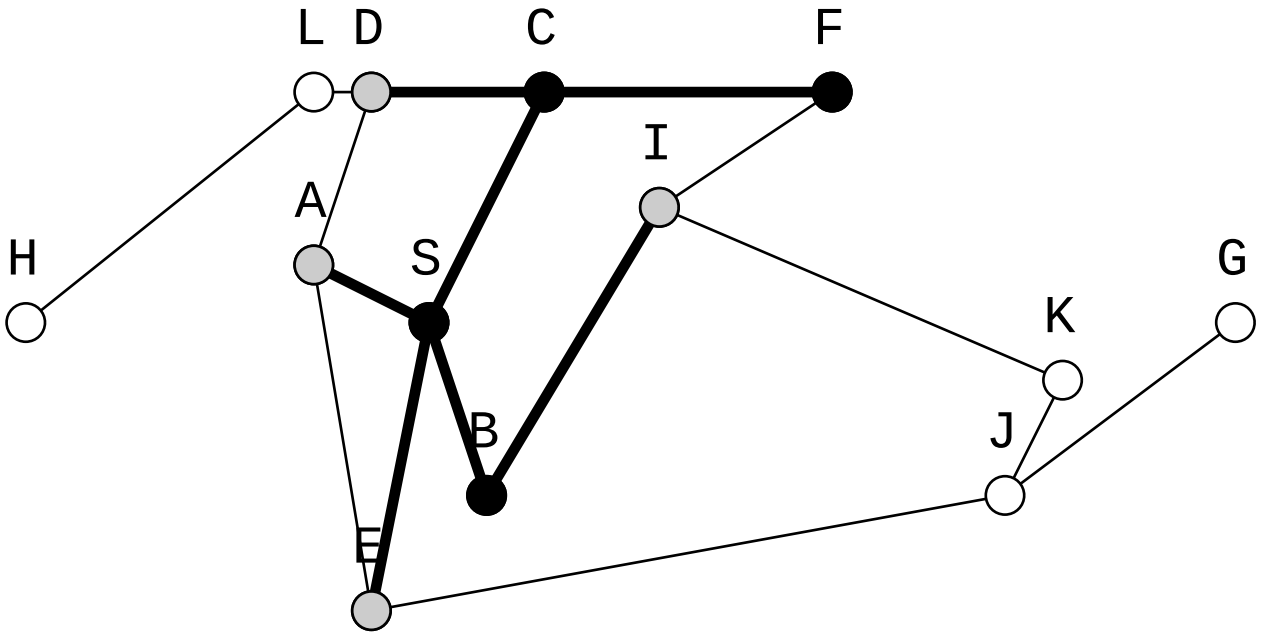
C: g= 4.5 h=12.6 f=17.1

B: g= 3.2 h=13.3 f=16.5

S: g= 0.0 h=14.0 f=14.0

A* search

Iteration 4



OPEN list:

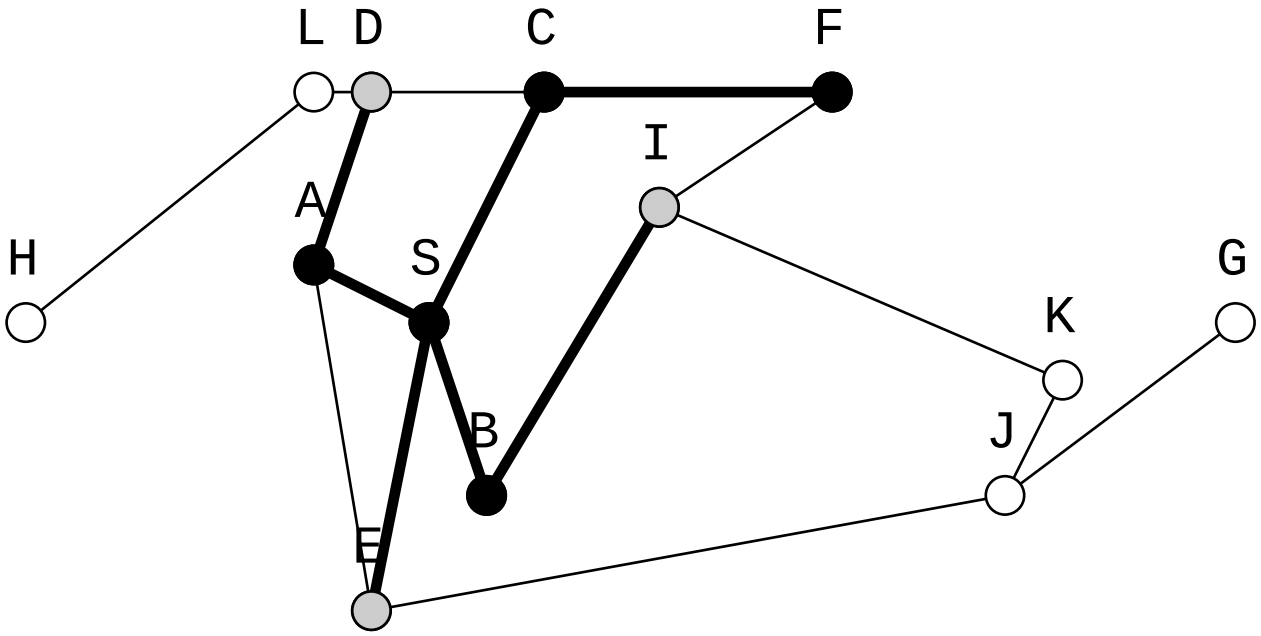
```
  D: g= 7.5 h=15.5 f=23.0
  I: g= 9.0 h=10.2 f=19.2
  A: g= 2.2 h=16.0 f=18.3  <== expand
  E: g= 5.1 h=15.8 f=20.9
```

CLOSED list:

```
  F: g= 9.5 h= 8.1 f=17.5
  C: g= 4.5 h=12.6 f=17.1
  B: g= 3.2 h=13.3 f=16.5
  S: g= 0.0 h=14.0 f=14.0
```

A* search

Iteration 5



OPEN list:

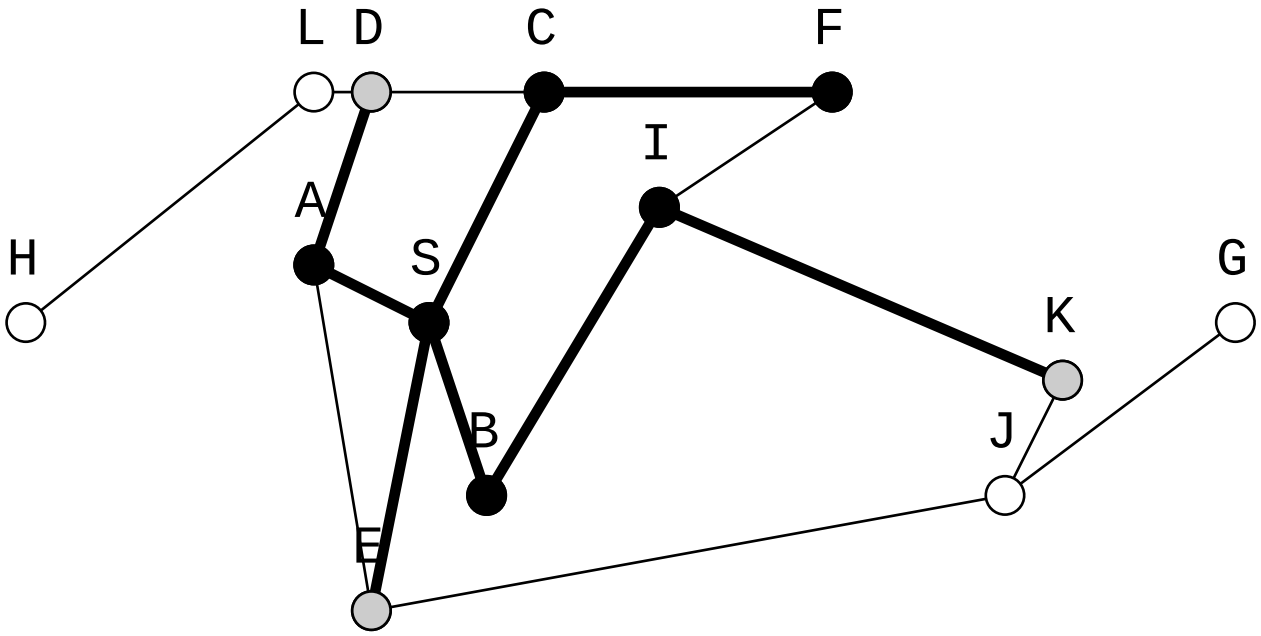
```
  D: g= 5.4 h=15.5 f=20.9
  I: g= 9.0 h=10.2 f=19.2  <== expand
  E: g= 5.1 h=15.8 f=20.9
```

CLOSED list:

```
  A: g= 2.2 h=16.0 f=18.3
  F: g= 9.5 h= 8.1 f=17.5
  C: g= 4.5 h=12.6 f=17.1
  B: g= 3.2 h=13.3 f=16.5
  S: g= 0.0 h=14.0 f=14.0
```

A* search

Iteration 6



OPEN list:

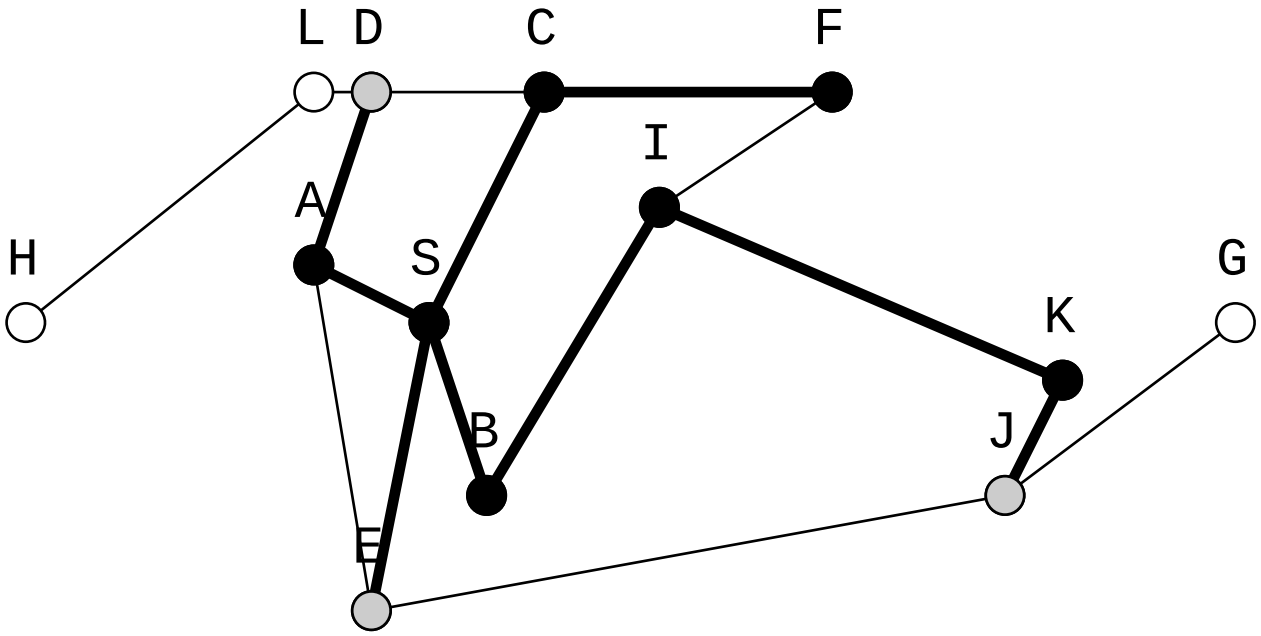
```
  K: g=16.6 h= 3.2 f=19.8  <== expand
  D: g= 5.4 h=15.5 f=20.9
  E: g= 5.1 h=15.8 f=20.9
```

CLOSED list:

```
  I: g= 9.0 h=10.2 f=19.2
  A: g= 2.2 h=16.0 f=18.3
  F: g= 9.5 h= 8.1 f=17.5
  C: g= 4.5 h=12.6 f=17.1
  B: g= 3.2 h=13.3 f=16.5
  S: g= 0.0 h=14.0 f=14.0
```

A* search

Iteration 7



OPEN list:

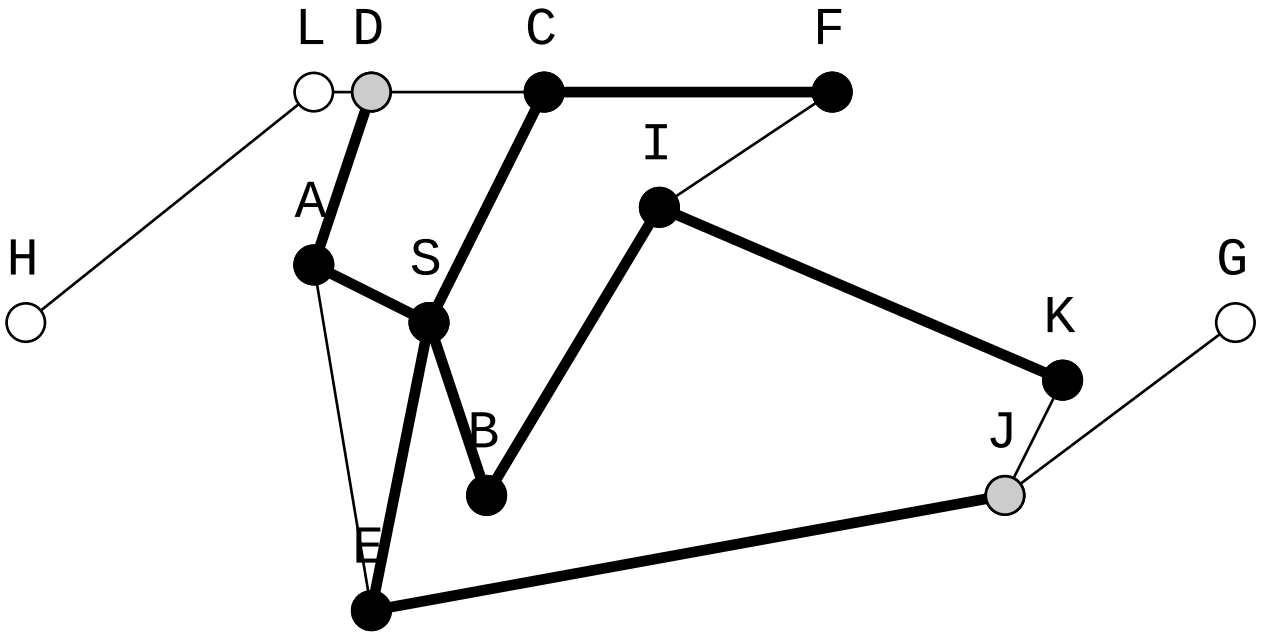
```
  J: g=18.8 h= 5.0 f=23.8
  D: g= 5.4 h=15.5 f=20.9
  E: g= 5.1 h=15.8 f=20.9  <== expand
```

CLOSED list:

```
  K: g=16.6 h= 3.2 f=19.8
  I: g= 9.0 h=10.2 f=19.2
  A: g= 2.2 h=16.0 f=18.3
  F: g= 9.5 h= 8.1 f=17.5
  C: g= 4.5 h=12.6 f=17.1
  B: g= 3.2 h=13.3 f=16.5
  S: g= 0.0 h=14.0 f=14.0
```

A* search

Iteration 8



OPEN list:

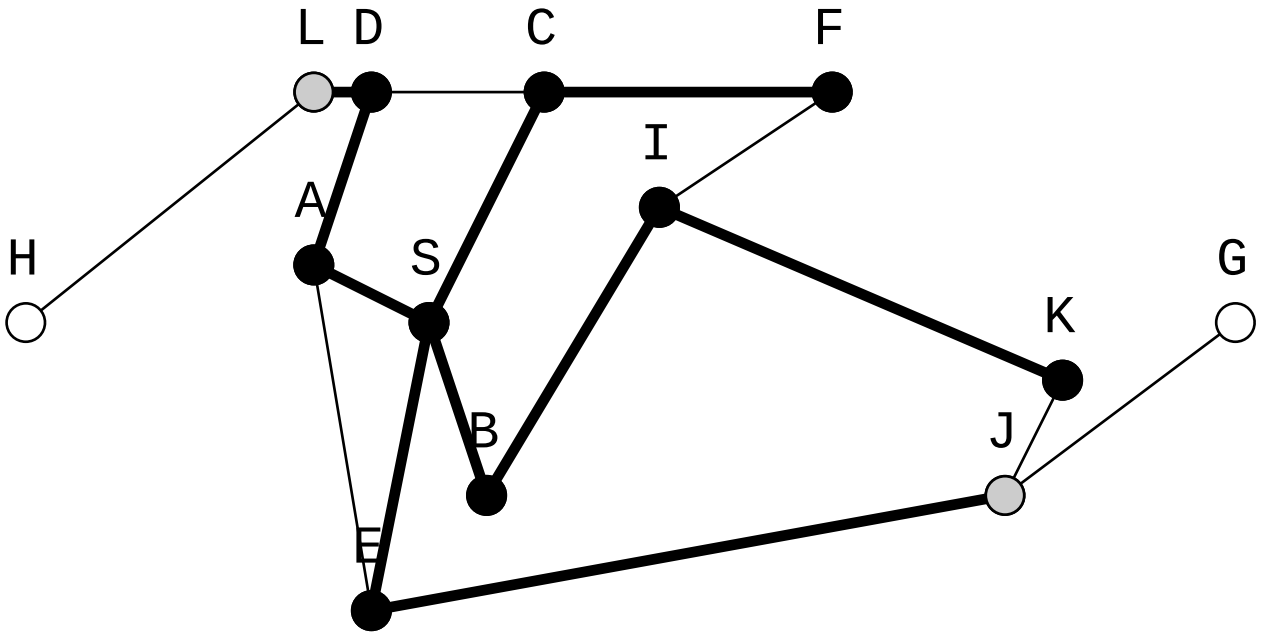
```
  J: g=16.3 h= 5.0 f=21.3
  D: g= 5.4 h=15.5 f=20.9  <== expand
```

CLOSED list:

```
  E: g= 5.1 h=15.8 f=20.9
  K: g=16.6 h= 3.2 f=19.8
  I: g= 9.0 h=10.2 f=19.2
  A: g= 2.2 h=16.0 f=18.3
  F: g= 9.5 h= 8.1 f=17.5
  C: g= 4.5 h=12.6 f=17.1
  B: g= 3.2 h=13.3 f=16.5
  S: g= 0.0 h=14.0 f=14.0
```

A* search

Iteration 9



OPEN list:

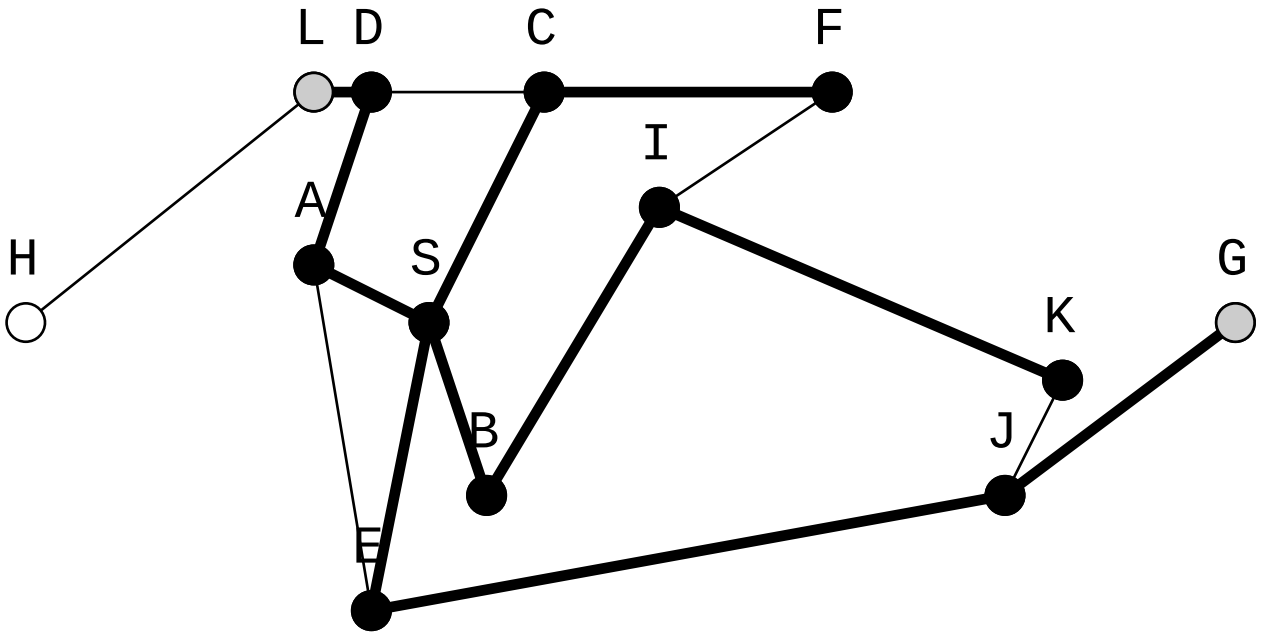
```
  L: g= 6.4 h=16.5 f=22.9
  J: g=16.3 h= 5.0 f=21.3  <== expand
```

CLOSED list:

```
  D: g= 5.4 h=15.5 f=20.9
  E: g= 5.1 h=15.8 f=20.9
  K: g=16.6 h= 3.2 f=19.8
  I: g= 9.0 h=10.2 f=19.2
  A: g= 2.2 h=16.0 f=18.3
  F: g= 9.5 h= 8.1 f=17.5
  C: g= 4.5 h=12.6 f=17.1
  B: g= 3.2 h=13.3 f=16.5
  S: g= 0.0 h=14.0 f=14.0
```

A* search

Iteration 10



OPEN list:

```
  G: g=21.3 h= 0.0 f=21.3  <== expand
  L: g= 6.4 h=16.5 f=22.9
```

CLOSED list:

```
  J: g=16.3 h= 5.0 f=21.3
  D: g= 5.4 h=15.5 f=20.9
  E: g= 5.1 h=15.8 f=20.9
  K: g=16.6 h= 3.2 f=19.8
  I: g= 9.0 h=10.2 f=19.2
  A: g= 2.2 h=16.0 f=18.3
  F: g= 9.5 h= 8.1 f=17.5
  C: g= 4.5 h=12.6 f=17.1
  B: g= 3.2 h=13.3 f=16.5
  S: g= 0.0 h=14.0 f=14.0
```